Lesson Plan

Name of the faculty: Sh. Vikash Dahiya, Lecturer in Mechanical Engg.
Discipline: Mechanical
Semester: 5th Mechanical
Subject: THEORY OF MACHINES

Lesson Plan Duration: 15 weeks
Work Load (Lecture/ Practical) per week (in hours): Lectures- 02, Practical- 02

Week	Theory		Practical	
	Lecture day	**Topic (including assignment /test)**	**Practical Day**	**Topic**
1st	1st	Simple Mechanisms, Introduction to link	1st & 2nd	To study inversion of Four Bar Mechanism, Single Slider Crank Chain and Double Slider Crank Chain Mechanism with the help of working models.
	2nd	kinematic pair, lower and higher pair		
2nd	1st	Kinematic chain Mechanism and Inversions	1st & 2nd	To construct radial cam profile for uniform velocity with knife edge and roller follower on drawing sheet.
	2nd	Different types of mechanisms (with examples)		
3rd	1st	Introduction to Belt and Rope drives	1st & 2nd	To construct radial cam profile for SHM with knife edge and roller follower on drawing sheet.
	2nd	Types of belt drives, types of pulleys		
4th	1st	Concept of velocity ratio, slip and creep	1st & 2nd	To construct radial cam profile for uniform acceleration and retardation with knife edge and roller follower on drawing sheet.
	2nd	crowning of pulleys (simple numericals) condition for maximum horse power (simple numericals)		
5th	1st	Different types of chains and their terminology	1st & 2nd	To find the moment of inertia of a flywheel.
	2nd	Gear terminology and types of gears		
6th	1st	applications of gears, simple gear train.	1st & 2nd	To Study the different types of centrifugal governors & plot graph between R.P.M & Displacement of sleeve.
	2nd	compound gear train, power transmitted by simple spur gear		
7th	1st	Principle of flywheel, applications of flywheel	1st & 2nd	To study various types of belts drives and to calculate velocity ratio.
	2nd	Turning - moment diagram of flywheel for different engines		
8th	1st	Fluctuation of speed and speed	1st & 2nd	To study different types of gear trains with the help of working models and to calculate Velocity ratio.
	2nd	Coefficient of fluctuation of speed and energy		
9th	1st	Simple numerical problems on fluctuation of speed	1st & 2nd	To perform the experiment of Balancing of rotating parts and find the unbalanced couple and forces.
	2nd	Principal of governor, Simple description		
10th	1st	working of Watt , Porter and Hartnel governor (simple numericals based on watt governor)		
	2nd	Hunting and isochronisms of governor		
11th	1st	Stability and sensitiveness of a governor		
	2nd	Concept of balancing		
12th	1st	Introduction to balancing of rotating masses, simple numericals on balancing.		
	2nd	Simple problems related to several masses rotating in different planes		
13th	1st	Concept of vibrations		
	2nd	Types of vibrations.		

14th	1st	longitudinal , transverse and torsional vibrations		
	2nd	Simple numerical on vibrations. Damping of vibrations		
15th	1st	Causes of vibrations in machines		
	2nd	harmful effects on vibrations, remedies		